

09/743731

10 Rev F 25 APR 2001

SEQUENCE LISTING

<110> Smit, John

<120> CLEAVAGE OF CAULOBACTER PRODUCED  
RECOMBINANT FUSION PROTEINS

<130> 08106-004001

<140> 09/743,731

<141> 2001-01-12

<150> PCT/CA99/00637

<151> 1999-07-14

<150> CA 2,237,704

<151> 1998-07-14

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<213> Artificial Sequence

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<223> Fusion protein

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<212> PRT

<213> Artificial Sequence

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<223> Synthetically generated peptide

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Met Ala Tyr Thr Thr  
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gcc cag ttg gtg act gcg tac acc aac gcc aac ctc ggc aag gcg cct 163  
Ala Gln Leu Val Thr Ala Tyr Thr Asn Ala Asn Leu Gly Lys Ala Pro  
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gac gcc acc acg ctg acg ctc gac gcg tac gcg act caa acc cag 211  
Asp Ala Ala Thr Thr Leu Thr Leu Asp Ala Tyr Ala Thr Gln Thr Gln  
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acg ggc ggc ctc tcg gac gcc gct gcg ctg acc aac acc ctg aag ctg 259  
Thr Gly Gly Leu Ser Asp Ala Ala Leu Thr Asn Thr Leu Lys Leu  
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gtc aac agc acg acg gct gtt gcc atc cag acc tac cag ttc ttc acc 307  
Val Asn Ser Thr Thr Ala Val Ala Ile Gln Thr Tyr Gln Phe Phe Thr  
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ggc gtt gcc ccg tcg gcc gct ggt ctg gac ttc ctg gtc gac tcg acc 355  
Gly Val Ala Pro Ser Ala Ala Gly Leu Asp Phe Leu Val Asp Ser Thr  
70 75 80 85

acc aac acc aac gac ctg aac gac gcg tac tac tcg aag ttc gct cag 403  
Thr Asn Thr Asn Asp Leu Asn Asp Ala Tyr Tyr Ser Lys Phe Ala Gln  
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gaa aac cgc ttc atc aac ttc tcg atc aac ctg gcc acg ggc gcc ggc 451  
Glu Asn Arg Phe Ile Asn Phe Ser Ile Asn Leu Ala Thr Gly Ala Gly  
105 110 115

gcc ggc gcg acg gct ttc gcc gcc tac acg ggc gtt tcg tac gcc 499  
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Gln Thr Val Ala Thr Ala Tyr Asp Lys Ile Ile Gly Asn Ala Val Ala  
135 140 145

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Thr Ala Ala Gly Val Asp Val Ala Ala Val Ala Phe Leu Ser Arg  
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ttc	acg	gcc	gct	gcc	gac	atc	gat	ctg	gcc	gtc	aag	gcc	gcc	ctg	atc	691
Phe	Thr	Ala	Ala	Ala	Asp	Ile	Asp	Leu	Ala	Val	Lys	Ala	Ala	Leu	Ile	
185								190					195			
ggc	acc	atc	ctg	aac	gcc	gcc	acg	gtg	tcg	ggc	atc	ggt	ggt	tac	gcg	739
Gly	Thr	Ile	Leu	Asn	Ala	Ala	Thr	Val	Ser	Gly	Ile	Gly	Gly	Tyr	Ala	
200								205				210				
acc	gcc	acg	gcc	gct	atg	atc	aac	gac	ctg	tcg	gac	ggc	gcc	ctg	tcg	787
Thr	Ala	Thr	Ala	Ala	Met	Ile	Asn	Asp	Leu	Ser	Asp	Gly	Ala	Leu	Ser	
215								220				225				
acc	gac	aac	gct	ggc	gtg	aac	ctg	ttc	acc	gcc	tat	ccg	tcg	tcg		835
Thr	Asp	Asn	Ala	Ala	Gly	Val	Asn	Leu	Phe	Thr	Ala	Tyr	Pro	Ser	Ser	
230								235			240		245			
ggc	gtg	tcg	ggt	tcg	acc	ctc	tcg	ctg	acc	acc	gac	acc	ctg			883
Gly	Val	Ser	Gly	Ser	Thr	Leu	Ser	Leu	Thr	Thr	Gly	Thr	Asp	Thr	Leu	
250								255				260				
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Thr	Gly	Thr	Ala	Asn	Asn	Asp	Thr	Phe	Val	Ala	Gly	Glu	Val	Ala	Gly	
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Ala	Ala	Thr	Leu	Thr	Val	Gly	Asp	Thr	Leu	Ser	Gly	Gly	Ala	Gly	Thr	
280								285				290				
gac	gtc	ctg	acc	tgg	gtg	caa	gct	gct	gct	gac	gct	ctg	ccg	acc		1027
Asp	Val	Leu	Asn	Trp	Val	Gln	Ala	Ala	Ala	Val	Thr	Ala	Leu	Pro	Thr	
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Gly	Val	Thr	Ile	Ser	Gly	Ile	Glu	Thr	Met	Asn	Val	Thr	Ser	Gly	Ala	
310								315			320		325			
gct	atc	acc	ctg	acc	acg	tct	tcg	ggc	gtg	acg	ggt	ctg	acc	gcc	ctg	1123
Ala	Ile	Thr	Leu	Asn	Thr	Ser	Ser	Gly	Val	Thr	Gly	Leu	Thr	Ala	Leu	
330								335				340				
acc	acc	acc	acc	acc	ggc	gct	caa	acc	gtc	acc	gcc	ggc	gct	ggc		1171
Asn	Thr	Asn	Thr	Ser	Gly	Ala	Ala	Gln	Thr	Val	Thr	Ala	Gly	Ala	Gly	
345								350				355				
cag	acc	ctg	acc	gcc	acg	acc	gcc	gct	caa	gcc	gct	aac	acc	gtc	gcc	1219
Gln	Asn	Leu	Thr	Ala	Thr	Ala	Ala	Gln	Ala	Ala	Asn	Asn	Val	Ala		
360								365				370				
gtc	gac	ggg	cgc	gcc	aac	gtc	acc	gtc	gcc	tcg	acg	ggc	gtg	acc	tcg	1267
Val	Asp	Gly	Arg	Ala	Asn	Val	Thr	Ala	Ser	Thr	Gly	Val	Thr	Ser		
375								380				385				
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Val Ser Val Ala Asn Ser Ser Thr Thr Thr Gly Ala Ile Ala Val			
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Thr Gly Gly Thr Ala Val Thr Val Ala Gln Thr Ala Gly Asn Ala Val			
425	430	435	
aac acc acg ttg acg caa gcc gac gtc acc gtc acc ggt aac tcc acg			1459
Asn Thr Thr Leu Thr Gln Ala Asp Val Thr Val Thr Gly Asn Ser Ser			
440	445	450	
acc acg gcc gtc acg gtc acc caa acc gcc gtc acc gtc acc ggc gct			1507
Thr Thr Ala Val Thr Val Thr Gln Thr Ala Ala Ala Thr Ala Gly Ala			
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Thr Val Ala Gly Arg Val Asn Gly Ala Val Thr Ile Thr Asp Ser Ala			
470	475	480	485
gcc gcc tcg gcc acg acc gcc ggc aag atc gcc acg gtc acc ctg ggc			1603
Ala Ala Ser Ala Thr Thr Ala Gly Lys Ile Ala Thr Val Thr Leu Gly			
490	495	500	
agc ttc ggc gcc acg atc gac tcg acg gct ctg acg acc gtc aac			1651
Ser Phe Gly Ala Ala Thr Ile Asp Ser Ser Ala Leu Thr Thr Val Asn			
505	510	515	
ctg tcg ggc acg ggc acc tcg ctc ggc atc ggc cgc ggc gct ctg acc			1699
Leu Ser Gly Thr Gly Thr Ser Leu Gly Ile Gly Arg Gly Ala Leu Thr			
520	525	530	
gcc acg ccg acc gcc aac acc ctg acc ctg aac gtc aat ggt ctg acg			1747
Ala Thr Pro Thr Ala Asn Thr Leu Thr Leu Asn Val Asn Gly Leu Thr			
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acg acc ggc gcg atc acg gac tcg gaa gcg gct gct gac gat ggt ttc			1795
Thr Thr Gly Ala Ile Thr Asp Ser Glu Ala Ala Asp Asp Gly Phe			
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acc acc atc aac atc gct ggt tcg acc gcc tct tcg acg atc gcc agc			1843
Thr Thr Ile Asn Ile Ala Gly Ser Thr Ala Ser Ser Thr Ile Ala Ser			
570	575	580	
ctg gtg gcc gcc gac gcg acg acc ctg aac atc tcg ggc gac gct cgc			1891
Leu Val Ala Ala Asp Ala Thr Thr Leu Asn Ile Ser Gly Asp Ala Arg			
585	590	595	
gtc acg atc acc tcg cac acc gct gcc ctg acg ggc atc acg gtg			1939
Val Thr Ile Thr Ser His Thr Ala Ala Leu Thr Gly Ile Thr Val			
600	605	610	
acc aac agc gtt ggt gcg acc ctc ggc gcc gaa ctg gcg acc ggt ctg			1987
Thr Asn Ser Val Gly Ala Thr Leu Gly Ala Glu Leu Ala Thr Gly Leu			

615

620

625

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 630 635 640 645

acc aag gcg atc gtc atg ggc gcc ggc gac gac acc gtc acc gtc agc 2083  
 Thr Lys Ala Ile Val Met Gly Ala Gly Asp Asp Thr Val Thr Val Ser  
 650 655 660

tcg gcg acc ctg ggc gct ggt ggt tcg gtc aac ggc ggc gac ggc acc 2131  
 Ser Ala Thr Leu Gly Ala Gly Ser Val Asn Gly Gly Asp Gly Thr  
 665 670 675

gac gtt ctg gtg gcc aac gtc aac ggt tcg tcg ttc agc gct gac ccg 2179  
 Asp Val Leu Val Ala Asn Val Asn Gly Ser Ser Phe Ser Ala Asp Pro  
 680 685 690

gcc ttc ggc ggc ttc gaa acc ctc cgc gtc gct ggc gcg gct caa 2227  
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ggc tcg cac aac gcc aac ggc ttc acg gct ctg caa ctg ggc gcg acg 2275  
 Gly Ser His Asn Ala Asn Gly Phe Thr Ala Leu Gln Leu Gly Ala Thr  
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gcg ggt gcg acg acc ttc acc aac gtt gcg gtg aat gtc ggc ctg acc 2323  
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gtt ctg gcg gct ccg acc ggt acg acg acc gtg acc ctg gcc aac gcc 2371  
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acg ggc acc tcg gac gtg ttc aac ctg acc ctg tcg tcc tcg gcc gct 2419  
 Thr Gly Thr Ser Asp Val Phe Asn Leu Thr Leu Ser Ser Ala Ala  
 760 765 770

ctg gcc gct ggt acg gtt gcg ctg gct ggc gtc gag acg gtg aac atc 2467  
 Leu Ala Ala Gly Thr Val Ala Leu Ala Gly Val Glu Thr Val Asn Ile  
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gcc gcc acc gac acc aac acg acc gct cac gtc gac acg ctg acg ctg 2515  
 Ala Ala Thr Asp Thr Asn Thr Ala His Val Asp Thr Leu Thr Leu  
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caa gcc acc tcg gcc aag tcg atc gtg gtg acg ggc aac gcc ggt ctg 2563  
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aac ctg acc aac acc ggc aac acg gct gtc acc acg ttc gac gcc acg 2611  
 Asn Leu Thr Asn Thr Gly Asn Thr Ala Val Thr Ser Phe Asp Ala Ser  
 825 830 835

gcc gtc acc ggc acg gct ccg gct gtg acc ttc gtg tcg gcc aac acc 2659  
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ctg acc ggt tcg gcc acc gcc aat gac acc atc atc ggt ggc gct ggc Leu Thr Gly Ser Ala Thr Ala Asn Asp Thr Ile Ile Gly Gly Ala Gly 870 875 880 885	2755
gct gac acc ctg gtc tac acc ggc ggt acg gac acc ttc acg ggt ggc Ala Asp Thr Leu Val Tyr Thr Gly Gly Thr Asp Thr Phe Thr Gly Gly 890 895 900	2803
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Tyr Gln Phe Phe Thr Gly Val Ala Pro	Ser Ala Ala Gly Leu Asp Phe	
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Leu Val Asp Ser Thr Thr Asn Thr Asn	Asp Leu Asn Asp Ala Tyr Tyr	
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Ser Lys Phe Ala Gln Glu Asn Arg	Phe Ile Asn Phe Ser Ile Asn Leu	
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Ala Thr Gly Ala Gly Ala Gly	Ala Thr Ala Phe Ala Ala Tyr Thr	
115	120	125
Gly Val Ser Tyr Ala Gln Thr Val	Ala Thr Ala Tyr Asp Lys Ile Ile	
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Gly Asn Ala Val Ala Thr Ala Ala	Gly Val Asp Val Ala Ala Ala Val	
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Ala Phe Leu Ser Arg Gln Ala Asn Ile	Asp Tyr Leu Thr Ala Phe Val	
165	170	175
Arg Ala Asn Thr Pro Phe Thr Ala	Ala Ala Asp Ile Asp Leu Ala Val	
180	185	190
Lys Ala Ala Leu Ile Gly Thr Ile	Leu Asn Ala Ala Thr Val Ser Gly	
195	200	205
Ile Gly Gly Tyr Ala Thr Ala Ala	Met Ile Asn Asp Leu Ser	
210	215	220
Asp Gly Ala Leu Ser Thr Asp Asn	Ala Ala Gly Val Asn Leu Phe Thr	
225	230	240
Ala Tyr Pro Ser Ser Gly Val Ser	Gly Ser Thr Leu Ser Leu Thr Thr	
245	250	255
Gly Thr Asp Thr Leu Thr Gly Thr	Ala Asn Asn Asp Thr Phe Val Ala	
260	265	270
Gly Glu Val Ala Gly Ala Ala	Thr Val Gly Asp Thr Leu Ser	
275	280	285
Gly Gly Ala Gly Thr Asp Val Leu	Asn Trp Val Gln Ala Ala Ala Val	
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Thr Ala Leu Pro Thr Gly Val Thr	Ile Ser Gly Ile Glu Thr Met Asn	
305	310	320
Val Thr Ser Gly Ala Ala Ile Thr	Leu Asn Thr Ser Ser Gly Val Thr	
325	330	335
Gly Leu Thr Ala Leu Asn Thr Asn	Thr Ser Gly Ala Ala Gln Thr Val	
340	345	350
Thr Ala Gly Ala Gly Gln Asn	Leu Thr Ala Thr Thr Ala Ala Gln Ala	
355	360	365
Ala Asn Asn Val Ala Val Asp	Gly Arg Ala Asn Val Thr Val Ala Ser	
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Thr Gly Val Thr Ser Gly Thr Thr	Val Gly Ala Asn Ser Ala Ala	
385	390	400
Ser Gly Thr Val Ser Val Ser Val	Ala Asn Ser Ser Thr Thr Thr	
405	410	415
Gly Ala Ile Ala Val Thr Gly Gly	Thr Ala Val Thr Val Ala Gln Thr	
420	425	430
Ala Gly Asn Ala Val Asn Thr	Thr Leu Thr Gln Ala Asp Val Thr Val	
435	440	445
Thr Gly Asn Ser Ser Thr Thr Ala	Val Thr Gln Thr Ala Ala	
450	455	460
Ala Thr Ala Gly Ala Thr Val Ala	Gly Arg Val Asn Gly Ala Val Thr	
465	470	480

Ile Thr Asp Ser Ala Ala Ala Ser Ala Thr Thr Ala Gly Lys Ile Ala  
 485 490 495  
 Thr Val Thr Leu Gly Ser Phe Gly Ala Ala Thr Ile Asp Ser Ser Ala  
 500 505 510  
 Leu Thr Thr Val Asn Leu Ser Gly Thr Gly Thr Ser Leu Gly Ile Gly  
 515 520 525  
 Arg Gly Ala Leu Thr Ala Thr Pro Thr Ala Asn Thr Leu Thr Leu Asn  
 530 535 540  
 Val Asn Gly Leu Thr Thr Gly Ala Ile Thr Asp Ser Glu Ala Ala  
 545 550 555 560  
 Ala Asp Asp Gly Phe Thr Thr Ile Asn Ile Ala Gly Ser Thr Ala Ser  
 565 570 575  
 Ser Thr Ile Ala Ser Leu Val Ala Ala Asp Ala Thr Thr Leu Asn Ile  
 580 585 590  
 Ser Gly Asp Ala Arg Val Thr Ile Thr Ser His Thr Ala Ala Ala Leu  
 595 600 605  
 Thr Gly Ile Thr Val Thr Asn Ser Val Gly Ala Thr Leu Gly Ala Glu  
 610 615 620  
 Leu Ala Thr Gly Leu Val Phe Thr Gly Gly Ala Gly Arg Asp Ser Ile  
 625 630 635 640  
 Leu Leu Gly Ala Thr Thr Lys Ala Ile Val Met Gly Ala Gly Asp Asp  
 645 650 655  
 Thr Val Thr Val Ser Ser Ala Thr Leu Gly Ala Gly Gly Ser Val Asn  
 660 665 670  
 Gly Gly Asp Gly Thr Asp Val Leu Val Ala Asn Val Asn Gly Ser Ser  
 675 680 685  
 Phe Ser Ala Asp Pro Ala Phe Gly Gly Phe Glu Thr Leu Arg Val Ala  
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 Gln Leu Gly Ala Thr Ala Gly Ala Thr Thr Phe Thr Asn Val Ala Val  
 725 730 735  
 Asn Val Gly Leu Thr Val Leu Ala Ala Pro Thr Gly Thr Thr Val  
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 755 760 765  
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 770 775 780  
 Glu Thr Val Asn Ile Ala Ala Thr Asp Thr Asn Thr Thr Ala His Val  
 785 790 795 800  
 Asp Thr Leu Thr Leu Gln Ala Thr Ser Ala Lys Ser Ile Val Val Thr  
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 Gly Asn Ala Gly Leu Asn Leu Thr Asn Thr Gly Asn Thr Ala Val Thr  
 820 825 830  
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 Val Ser Ala Asn Thr Thr Val Gly Glu Val Val Thr Ile Arg Gly Gly  
 850 855 860  
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 865 870 875 880  
 Ile Gly Gly Ala Gly Ala Asp Thr Leu Val Tyr Thr Gly Gly Thr Asp  
 885 890 895  
 Thr Phe Thr Gly Gly Thr Gly Ala Asp Ile Phe Asp Ile Asn Ala Ile  
 900 905 910  
 Gly Thr Ser Thr Ala Phe Val Thr Ile Thr Asp Ala Ala Val Gly Asp  
 915 920 925  
 Lys Leu Asp Leu Val Gly Ile Ser Thr Asn Gly Ala Ile Ala Asp Gly

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945	950	955
Tyr Leu Asp Ala Ala Ala Gly Asp Gly Ser Gly Thr Ser Val Ala		960
965	970	975
Lys Trp Phe Gln Phe Gly Gly Asp Thr Tyr Val Val Val Asp Ser Ser		
980	985	990
Ala Gly Ala Thr Phe Val Ser Gly Ala Asp Ala Val Ile Lys Leu Thr		
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Gly Leu Val Thr Leu Thr Thr Ser Ala Phe Ala Thr Glu Val Leu Thr		
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Leu Ala		
1025		

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	Ser Gln Gly Ala Gly Leu Gly Gln Gly Ala Gly Ala Ala Ala		
	20 25 30		
	gct gcg gcc ggt ggc gct ggc cag ggc ggg ctg ggc tcg cag ggc gcc		144
	Ala Ala Ala Gly Gly Ala Gly Gln Gly Leu Gly Ser Gln Gly Ala		
	35 40 45		
	ggc caa ggc gct ggc gcg gcc gct gcg gcc ggt ggc gcc ggc cag		192
	Gly Gln Gly Ala Gly Ala Ala Ala Ala Gly Gly Ala Gly Gln		
	50 55 60		
	ggt ggc tac ggc ggc ctg ggc agc cag ggc gcc ggt cgc ggc ggt cag		240
	Gly Gly Tyr Gly Gly Leu Gly Ser Gln Gly Ala Gly Arg Gly Gly Gln		
	65 70 75 80		
	ggc gcc ggt gcc gcg gct gcg gcc ggt ggc gct ggg caa ggc ggc		288
	Gly Ala Gly Ala Ala Ala Ala Gly Gly Ala Gly Gln Gly Gly		
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 35 40 45  
 Gly Gln Gly Ala Gly Ala Ala Ala Ala Gly Gly Ala Gly Gln  
 50 55 60  
 Gly Gly Tyr Gly Gly Leu Gly Ser Gln Gly Ala Gly Arg Gly Gly Gln  
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 Tyr Gly Gly Leu Gly Ser  
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<210> 8  
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 <213> Infectious Pancreatic Necrosis Virus

<220>  
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 <222> (1) ... (780)

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 cca gag act gga cca gca agc atc ccg gac gac ata acg gag aga cac 96  
 Pro Glu Thr Gly Pro Ala Ser Ile Pro Asp Asp Ile Thr Glu Arg His  
 20 25 30  
 atc tta aaa caa gag acc tcg tca tac aac tta gag gtc tcc gaa tca 144  
 Ile Leu Lys Gln Glu Thr Ser Ser Tyr Asn Leu Glu Val Ser Glu Ser  
 35 40 45  
 gga agt ggc att ctt gtt tgt ttc cct ggg gca cca ggc tca cgg atc 192  
 Gly Ser Gly Ile Leu Val Cys Phe Pro Gly Ala Pro Gly Ser Arg Ile  
 50 55 60  
 ggt gca cac tac aga tgg aat gcg aac cag acg ggg ctg gag ttc gac 240  
 Gly Ala His Tyr Arg Trp Asn Ala Asn Gln Thr Gly Leu Glu Phe Asp  
 65 70 75 80  
 cag tgg ctg gag acg tcg cag gac ctg aag aaa gcc ttc aac tac ggg 288  
 Gln Trp Leu Glu Thr Ser Gln Asp Leu Lys Lys Ala Phe Asn Tyr Gly  
 85 90 95  
 agg ctg atc tca agg aaa tac gac att caa agc tcc aca cta ccg gcc 336

Arg Leu Ile Ser Arg Lys Tyr Asp Ile Gln Ser Ser Thr Leu Pro Ala			
100	105	110	
ggt ctc tat gct ctg aac ggg acg ctc aac gct gcc acc ttc gaa ggc			384
Gly Leu Tyr Ala Leu Asn Gly Thr Leu Asn Ala Ala Thr Phe Glu Gly			
115	120	125	
agt ctg tct gag gtg gag agc ctg acc tac aat agc ctg atg tcc cta			432
Ser Leu Ser Glu Val Glu Ser Leu Thr Tyr Asn Ser Leu Met Ser Leu			
130	135	140	
act acg aac ccc cag gac aaa gcc aac aac cag ctg gtg acc aaa gga			480
Thr Thr Asn Pro Gln Asp Lys Ala Asn Asn Gln Leu Val Thr Lys Gly			
145	150	155	160
gtc acc gtc ctg aat cta cca aca ggg ttc gac aaa cca tac gtc cgc			528
Val Thr Val Leu Asn Leu Pro Thr Gly Phe Asp Lys Pro Tyr Val Arg			
165	170	175	
cta gag gac gag aca ccc cag ggt ctc cag tca atg aac ggg gcc agg			576
Leu Glu Asp Glu Thr Pro Gln Gly Leu Gln Ser Met Asn Gly Ala Arg			
180	185	190	
ctg agg tgc aca gct gca att gca cca cgg agg tac gag atc gac ctc			624
Leu Arg Cys Thr Ala Ala Ile Ala Pro Arg Arg Tyr Glu Ile Asp Leu			
195	200	205	
cca tcc caa agc cta ccc ccc gtt cct gcg aca gga acc ctc acc act			672
Pro Ser Gln Ser Leu Pro Pro Val Pro Ala Thr Gly Thr Leu Thr Thr			
210	215	220	
ctc tac gag gga aac gcc gac atc gtc agc tcc aca aca gtg acg gga			720
Leu Tyr Glu Gly Asn Ala Asp Ile Val Ser Ser Thr Thr Val Thr Gly			
225	230	235	240
gac ata aac ttc agt ctg gca gaa cga ccc gca aac gag acc agg ttc			768
Asp Ile Asn Phe Ser Leu Ala Glu Arg Pro Ala Asn Glu Thr Arg Phe			
245	250	255	
gac ttc cag ctg			780
Asp Phe Gln Leu			
260			

<210> 9  
<211> 260  
<212> PRT  
<213> Infectious Pancreatic Necrosis Virus

<400> 9  
Met Asn Thr Asn Lys Ala Thr Ala Thr Tyr Leu Lys Ser Ile Met Leu  
1 5 10 15  
Pro Glu Thr Gly Pro Ala Ser Ile Pro Asp Asp Ile Thr Glu Arg His  
20 25 30  
Ile Leu Lys Gln Glu Thr Ser Ser Tyr Asn Leu Glu Val Ser Glu Ser  
35 40 45  
Gly Ser Gly Ile Leu Val Cys Phe Pro Gly Ala Pro Gly Ser Arg Ile

50	55	60	
Gly Ala His Tyr Arg Trp Asn Ala Asn Gln Thr	Gly Leu Glu Phe Asp		
65	70	75	80
Gln Trp Leu Glu Thr Ser Gln Asp Leu Lys Lys Ala Phe Asn Tyr Gly			
85	90	95	
Arg Leu Ile Ser Arg Lys Tyr Asp Ile Gln Ser Ser Thr Leu Pro Ala			
100	105	110	
Gly Leu Tyr Ala Leu Asn Gly Thr Leu Asn Ala Ala Thr Phe Glu Gly			
115	120	125	
Ser Leu Ser Glu Val Glu Ser Leu Thr Tyr Asn Ser Leu Met Ser Leu			
130	135	140	
Thr Thr Asn Pro Gln Asp Lys Ala Asn Asn Gln Leu Val Thr Lys Gly			
145	150	155	160
Val Thr Val Leu Asn Leu Pro Thr Gly Phe Asp Lys Pro Tyr Val Arg			
165	170	175	
Leu Glu Asp Glu Thr Pro Gln Gly Leu Gln Ser Met Asn Gly Ala Arg			
180	185	190	
Leu Arg Cys Thr Ala Ala Ile Ala Pro Arg Arg Tyr Glu Ile Asp Leu			
195	200	205	
Pro Ser Gln Ser Leu Pro Pro Val Pro Ala Thr Gly Thr Leu Thr Thr			
210	215	220	
Leu Tyr Glu Gly Asn Ala Asp Ile Val Ser Ser Thr Thr Val Thr Gly			
225	230	235	240
Asp Ile Asn Phe Ser Leu Ala Glu Arg Pro Ala Asn Glu Thr Arg Phe			
245	250	255	
Asp Phe Gln Leu			
260			

<210> 10  
 <211> 131  
 <212> PRT  
 <213> Escherichia coli

<400> 10			
Phe Ala Cys Lys Thr Ala Asn Gly Thr Ala Ile Pro Ile Gly Gly			
1	5	10	15
Ser Ala Asn Val Tyr Val Asn Leu Ala Pro Val Val Asn Val Gly Gln			
20	25	30	
Asn Leu Val Val Asp Leu Ser Thr Gln Ile Phe Cys His Asn Asp Tyr			
35	40	45	
Pro Glu Thr Ile Thr Asp Tyr Val Thr Leu Gln Arg Gly Ser Ala Ser			
50	55	60	
Tyr Pro Phe Pro Thr Thr Ser Glu Thr Pro Arg Val Val Tyr Asn Ser			
65	70	75	80
Arg Thr Asp Lys Pro Trp Pro Val Ala Leu Tyr Leu Thr Pro Val Ser			
85	90	95	
Ser Ala Gly Gly Val Ala Ile Lys Ala Gly Ser Leu Ile Ala Val Leu			
100	105	110	
Ile Leu Arg Gln Thr Asn Asn Tyr Asn Ser Asp Asp Phe Gln Cys Asp			
115	120	125	
Val Ser Ala			
130			

<210> 11  
 <211> 131  
 <212> PRT  
 <213> Escherichia coli

<400> 11  
 Phe Ala Cys Lys Thr Ala Asn Gly Thr Ala Ile Pro Ile Gly Gly  
     1              5                 10                 15  
 Ser Ala Asn Val Tyr Val Asn Leu Ala Pro Val Val Asn Val Gly Gln  
     20             25                 30  
 Asn Leu Val Val Asp Leu Ser Thr Gln Ile Phe Cys His Asn Asp Tyr  
     35             40                 45  
 Pro Glu Thr Ile Thr Asp Tyr Val Thr Leu Gln Arg Gly Ser Ala Ser  
     50             55                 60  
 Tyr Pro Phe Pro Thr Thr Ser Glu Thr Pro Arg Val Val Tyr Asn Ser  
     65             70                 75                 80  
 Arg Thr Asp Lys Pro Trp Pro Val Ala Leu Tyr Leu Thr Pro Val Ser  
     85             90                 95  
 Ser Ala Gly Gly Val Ala Ile Lys Ala Gly Ser Leu Ile Ala Val Leu  
     100            105                 110  
 Ile Leu Arg Gln Thr Asn Asn Tyr Asn Ser Asp Asp Phe Gln Cys Asp  
     115            120                 125  
 Val Ser Ala  
     130

故其子曰：「吾父之子，其名何也？」